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MEMORANDUM FOR: *Higley*

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Central Intelligence Agency



Washington, D.C. 20505

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*Sen Proxmire*

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OCA 86-1575

13 May 1986

The Honorable William Proxmire  
Vice Chairman  
Subcommittee on Economic Resources,  
Competitiveness, and Security Economics  
United States Senate  
Washington, D.C. 20510

Dear Mr. Vice Chairman:

Attached is our response to your letter of 24 March 1986. If we  
can be of any more assistance, please let us know.

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Sincerely,

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Douglas J. MacEachin  
Director  
Soviet Analysis

Attachment:  
as stated

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JOINT ECONOMIC COMMITTEE

(CREATED PURSUANT TO SEC. 6(a) OF PUBLIC LAW 304, 79TH CONGRESS)

Washington, DC 20510

March 24, 1986

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Mr. Douglas MacEachin  
Director of Soviet Analysis  
Central Intelligence Agency  
Washington, D.C. 20505

Dear Mr. MacEachin:

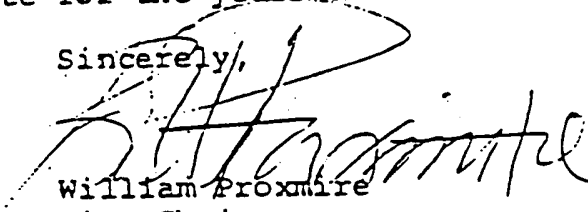
As I mentioned during the hearings on March 19, 1986, I have some written requests I would like you to respond to for the record, in addition to the requests I made during the hearing. I would like to have the responses in unclassified form. The requests are as follows:

1. Discuss the Soviet livestock feed dilemma and provide your projections of future Soviet grain import requirements worldwide and from the United States, compared with actual imports of recent years. Include in the discussion your assumptions about weather patterns.
2. Discuss Gorbachev's plans and recent government actions concerning changes in the industrial labor force and the extent to which it may be possible to offset slow growth in the labor supply by reducing underemployment. Address specific sectors of industrial production in your response.
3. Provide for the record a set of dollar and ruble comparisons of U.S. and Soviet defense spending for each of the years since 1965, based on the CIA's latest estimates.
4. Provide a list of the unit costs of Soviet weapons for items in current production. I would like this list to be as detailed as possible and to cover weapons in each of the categories contained in Table 1, "U.S. and U.S.S.R: Procurement of Selected Weapons Systems, 1974-85," in your paper submitted with your testimony.
5. Were there differences at the Party Congress in the "threat assessments" of Gorbachev, Marshall Sokolov, and Police Chief Chebrekhov and, if so, what is their significance?

Mr. Douglas MacEachin  
March 24, 1986  
Page Two

6. What was the annual growth rate of military procurement prior to the slowdown that began in 1974?
7. What is the evidence showing greater inflation in the Soviet defense sector than in the overall economy, and what rates of inflation do you estimate for the years 1970-1985?

Sincerely,



William Proxmire  
Vice Chairman  
Subcommittee on Economic Resources,  
Competitiveness, and Security  
Economics

WP:rkt

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1. Discuss the Soviet livestock feed dilemma and provide your projections of future Soviet grain import requirements worldwide and from the United States, compared with actual imports of recent years. Include in the discussion your assumptions about weather patterns.

In large measure Soviet consumers will judge General Secretary Gorbachev's commitment to their well-being by his ability to put more meat on the table. Soviet meat production, however, has been constrained by chronic shortages of all types of animal feeds. Meat production has also suffered from a substantial imbalance among those feeds available--high protein feeds such as soybean, concentrates such as grain, and roughages. Because of a shortage of high protein feeds, for example, the Soviets do not effectively make use of feed grains. As a result of these shortages and the imbalances, Soviet livestock take twice as long to achieve market weight as those in the United States, while requiring 1.5 to 2 times as much feed to do so.

To increase the output of product per farm animal, Gorbachev has moved aggressively to implement initiatives emphasizing the use of roughages and protein in animal diets, providing the resources--including additional fertilizers--for increased production of these components, and enhancing feed quality by improving facilities for processing and storage of feeds. Because Moscow will make enough progress on these initiatives to result at least in larger supplies of better balanced feed per animal, productivity--meat per animal and milk per cow--should increase.

Nonetheless, under most scenarios, Western grain will still be needed to achieve the ambitious 1990 meat production goals. The amount of required grain will, as always, depend in large measure on weather conditions:

- Our most likely scenario is for average weather--conditions approximating those of 1970-84--and continuation of the recent trend

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in fertilizer deliveries. Achieving 1990 meat production targets under these conditions would require some 40 million tons of grain imports--equal to the average annual quantity imported during 1981-85--even with increased quantities of feed per animal. A qualitative improvement in the composition of feed rations, however, could lower feed conversion ratios and reduce import demand to some 30-35 million tons.

- Very good weather--conditions approximating those of 1976-80-- complemented by increased yields of grain and roughages from more fertilizer and accompanied by a reduction in the share of grain in feed rations could totally obviate the need for Western grain imports.
- Poor weather during the period--conditions approximating those during 1961-65--particularly if accompanied by failure to increase fertilizer supplies, would force Moscow to cut back on its meat production goals. Hard currency constraints alone would preclude importing the quantities of grain needed to offset domestic production shortfalls.

The USSR's grain import behavior over the past few years indicates that Moscow considers the United States to be the residual grain supplier. It is likely that the United States will continue to be the supplier of last resort. Increased production by other grain producers combined with their aggressive marketing suggests that these countries could easily supply some 20-25 million tons of grain annually, and larger quantities in good years, to the USSR. In years of very large Soviet imports, however, the United States will continue to play a major role, supplying perhaps as much as 20 million tons.

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**2. Discuss Gorbachev's plans and recent government actions concerning changes in the industrial labor force and the extent to which it may be possible to offset slow growth in the labor supply by reducing underemployment.**

The Gorbachev regime has announced a number of plans and actions aimed at increasing the efficiency of the work force with the hope of offsetting the slow growth in labor supply. The strategy centers on gains achieved through "human factors" (reducing corruption and alcoholism, increasing labor discipline, rejuvenating managerial deadwood in the economic bureaucracy), organizational changes, and assimilation of new machinery and equipment.

Prime Minister Ryzhkov claims that substituting capital for labor, particularly in relatively low technology functions that employ large numbers of manual workers, would have an impact equivalent to adding 20 million workers to the labor force by 1990. Although such large numbers are not in the realm of reality, even partial success in this program would provide relief. In short, with an actual increment of about 3.2 million expected during 1986-90, this could be a major source of economic growth. However, the Soviets have no established mechanism for redistributing personnel if large numbers of manual workers are released. The responsibility for retraining displaced workers and finding them new jobs is unclear, and the tendency for enterprise managers to maintain a large reserve of workers shows no sign of abating.

Moreover, virtually all the measures announced in the past two years regarding labor utilization are variations of strategies that have been tried previously. During experimental phases, these measures have met with limited success, but have fallen short when implementation has been expanded. Nevertheless, they could contribute marginally to increases in productivity, at least in the short-run.

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Regulations for the certification of work positions in industry were announced in 1985. This decree, which calls for enterprises to conduct a survey and evaluation of the use of labor and equipment, is aimed at reducing the artificially high demand for labor and accelerating the retirement of obsolete equipment. Successful, but limited application of the certification procedure has prompted Moscow to expand it to all productive sectors of the economy over the next two years. The results of the certification will be forwarded to local planning officials to be used in drawing up regional balances of labor supply and demand.

The regime's commitment to the brigade form of labor organization and to the concept of collective contract has been extended economy-wide in the 12th Five-Year Plan from the initial application to machinery workers in 1979. Labor brigades are small groups of workers that are assigned resources and tasks according to a contract with enterprise management. The arrangement is touted as an effective way to raise productivity by improving planning and management, reducing production times, and enforcing labor discipline on lax workers through group pressure. It calls for distribution of bonus payments on the basis of the brigade's performance and individual productivity, rather than on the basis of an individual's wage rate. Even though more than 60 percent of industrial workers have been organized into brigades, most brigades exist in name only and have not been integrated into actual production. A key reason for their limited use appears to be opposition by ministerial and working-level managers, who see the contractual arrangements of the system as diluting their authority over workers.

An increase in pay for scientists, designers, and engineers will go into effect this year. Considering the regime's expressed concern regarding the application of scientific research for the economy, a pay scale revision for

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scientific workers is overdue (the last one was in 1957). Provisions in the resolution give management greater flexibility in promoting and financially rewarding productive workers. It represents an effort to enhance the prestige of the engineering profession which has declined in recent years.

The education reform of 1984 increases labor training for secondary school students. The share of students enrolled in vocational-technical schools will increase while the proportion of college-bound students will decline. This should boost the number of those entering the labor force at an earlier age, and intensive training should improve their efficiency on the job. The occupational training mix in vocational-technical schools is also slated for change as more sophisticated equipment and machinery are introduced as part of the modernization effort.

However, Gorbachev's efforts to raise productivity will be short-circuited if the regime does not increase incentives for workers in the form of quality goods and services. But more resources for this purpose do not seem to be in the offing, given the investment allocations already announced.

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3. **Provide for the record a set of dollar and ruble comparisons of US and Soviet defense spending for each of the years since 1965, based on CIA's latest estimates.**

Dollar Cost Comparisons

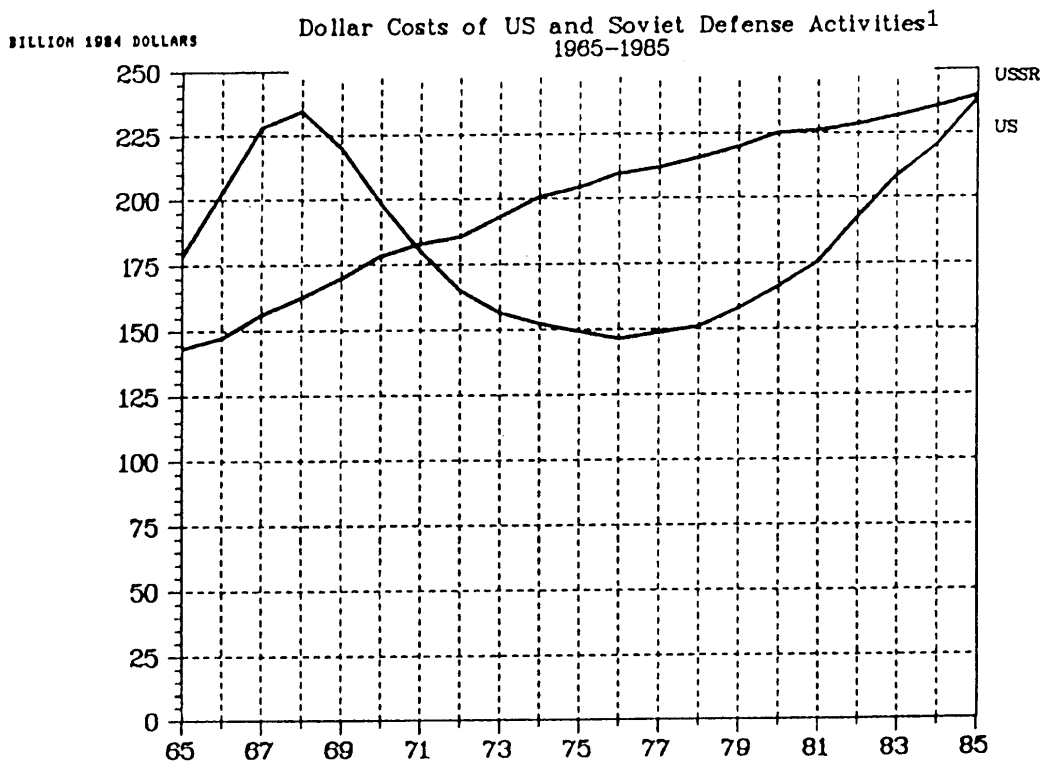
The costs of Soviet defense activities, as measured in constant 1984 dollars, exceeded those of the US over the 1965-85 period for most resource categories and missions (see attached chart).

- The cumulative costs of overall Soviet defense activities were about 10 percent greater than comparable US outlays.
- The cumulative costs of Soviet investment (i.e., military procurement and construction) were 30 percent greater than US investment outlays due to the much larger quantity of weapons and other equipment produced.
- The cumulative costs of Soviet RDT&E were more than 10 percent greater than US RDT&E outlays.
- The cumulative costs of Soviet operating activities were slightly less -- by 3 percent -- than US expenditures for these activities.
- The cumulative costs (excluding RDT&E) of Soviet strategic forces were about 2.5 times greater than US strategic outlays. For general purpose forces, cumulative Soviet costs were 15 percent greater than US outlays.

Comparisons on a year-by-year basis since 1976 show that while the cumulative dollar value of Soviet defense activities over the past 10 years exceeded comparable US outlays by 25 percent, the cost gap between the two, which in 1976 favored the USSR in all major resource categories and missions, has decreased. In 1985, for the first time since 1971, the dollar costs of Soviet activities did not substantially exceed US outlays.

This narrowing of the cost gap has resulted from markedly different trends in the two countries, particularly in procurement costs.

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1. US defense activities and their Soviet counterparts include National Security programs funded by the Department of Defense, defense-related nuclear programs funded by the Department of Energy, Selective Service activities, and the defense-related activities of the Coast Guard. Excluded from the comparisons are all the costs of military retirements and veterans programs, Soviet space programs that in the US would be funded by the National Aeronautics and Space Administration, military assistance and foreign military sales, civil defense programs, Soviet Internal Security Troops, and Soviet Railroad and Construction Troops.

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- US military procurement more than doubled over the 1976-85 period, growing on average at about 11 percent a year. Growth was particularly rapid after 1980 when military procurement climbed by more than 13 percent a year.
- Soviet military procurement, on the other hand, leveled off after 1974 following dramatic increases in the late 1960s and early 1970s.

Although the dollar valuations of Soviet procurement have shown almost no growth since 1975, they have remained at a relatively high level -- about 60 billion dollars annually -- and have exceeded comparable US outlays during eight of the last 10 years. By maintaining their weapons procurement at this level, the Soviets were able to produce significantly more weapons than the United States in almost every major category. In contrast, the United States emphasized the purchase of fewer weapons that individually were more capable and more costly than Soviet equipment. The US also devoted an increasing share of its procurement outlays to improving both combat readiness and sustainability by increasing war reserve stockpiles of munitions and spare parts.

#### Ruble Comparisons

CIA supplements its primary comparison of US and Soviet defense activities in dollars with a comparison in rubles. We recognize that in such a cross-national comparison, it is valid to use either dollars or rubles as the common measure. Ruble comparisons, like dollar comparisons, provide an economic measure of the resources devoted to US and Soviet defense activities. The results each produce are different, but nonetheless both are equally valid.

Because of data limitations, we have much less confidence in our ruble estimates of US defense activities. This ruble estimate measures what it would cost the Soviets, in constant 1982 rubles, to produce and man a military force of the same size and with the same inventory as that

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of the United States and to operate that force as this country does. It is obviously not possible to employ in reverse the method used in estimating the dollar cost of Soviet weapons and equipment; that is, asking Soviet contractors to estimate what it would cost to produce items of US equipment in the USSR. Instead, we have calculated four major resource categories -- R&D, procurement, construction, and O&M -- by applying ruble-dollar ratios. Personnel costs, the fifth major resource category, were estimated directly because of the availability of Soviet pay and allowance data.

We recently compared US and Soviet defense activities in rubles for 1984. The results of that comparison indicate that the USSR-to-US ratio for that year was 1.04, whereas the corresponding ratio in dollars was 1.07. The USSR-to-US ratio in rubles for procurement was 0.99, compared to 0.91 in dollars. The comparisons are essentially the same using either country's price structure because the US and USSR have similar preferences in their purchases of defense goods and activities.

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4. Provide a detailed list of the unit costs of Soviet weapons for items in current production covering the weapons in each of the categories contained in Table 1, "US and USSR: Procurement of Selected Weapon Systems, 1974-85" in the paper submitted with your testimony. [REDACTED]

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We are reluctant to release unit price information because of the strong potential that exists for its inadvertant misuse. Unit prices vary considerably because they depend on the size of the production run. Comparisons of relative unit prices can thus be quite misleading out of context. The unit price also depends on what is included in the "unit." CIA unit costs are not, in general, directly comparable with other published costs because of definitional differences. Moreover, these unit costs can change with the acquisition of new information, reestimates by contractors, and movements to more recent price bases.

[REDACTED]

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Nevertheless, we would be more than happy to meet with members of your staff for the purpose of presenting the prices associated with specific weapon systems, explaining how these prices were derived, and placing the outlays for particular Soviet programs in proper context with the resource costs for other defense programs. [REDACTED]

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5. Were there differences at the Party Congress in the "threat" assessments of Gorbachev, Marshal Sokolov, and KGB Chief Chebrikov and, if so, what is their significance?

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Party Congresses are traditionally an occasion for self-congratulation rather than policy debate. The leadership attempts to present a show of unity behind its policy program for the next five years. Differing perspectives among Soviet leaders on domestic issues--such as the need for economic reform and restrictions on the privileges of the party elite--were evident in the 27th Congress in February-March, but indications of differences over national security and foreign policy were muted.

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Those differences that do exist in the threat assessments articulated by General Secretary Gorbachev, Minister of Defense Sokolov, and KGB Chief Chebrikov, can largely be explained by the different roles they each play in the Soviet leadership. Gorbachev articulates a position designed to convince the West of his sincerity in arms control negotiations and to justify to a domestic audience the restraints in defense spending that may be necessary to achieve his ambitious goals for modernizing the Soviet industrial base. Sokolov has a more narrow responsibility for meeting the military threat with military might. Chebrikov, as KGB Chief, has primary responsibility for countering the more subtle threats as presented to the Soviet system by the infiltration of Western ideas and the expansion of foreign contacts.

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More specifically, their approaches break down as follows:

-- Gorbachev described a continuing military threat from the US, but set out a strategy for responding to it that emphasized political rather than military means. He claimed that security could not forever be based on "fear of retribution." He was the first Soviet leader to

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6. **What was the annual growth rate of military procurement prior to the slowdown that began in 1974?**

Between 1965 and 1974, Soviet military procurement grew at approximately five percent per year, as measured in 1982 constant rubles. Rising procurement of ships and missiles was the primary source of this relatively high rate of growth.

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7. **What is the evidence showing greater inflation in the Soviet defense sector than in the overall economy, and what rates of inflation do you estimate for the years 1970-85?**

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According to our estimates, inflation in the defense sector averaged over 3 percent a year in 1971-82, while inflation in the civilian sector was about 2 percent for the same time period. The higher inflation evident in defense resulted primarily from a 4-percent average annual inflation in prices of military hardware, which comprises over 40 percent of total defense spending.

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Our research suggests that during the 1970s greater opportunities existed for inflation in weapon system prices than in the prices of other industrial goods, including civilian machinery, because the product list for military hardware changed quite rapidly. A defense manager could justify a higher price for a new weapon system by overstating its technical complexity, by understating the capabilities of systems that would be replaced by the new weapon, and by overstating the costs necessary to retool the factory to begin production.

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